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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,010	01/10/2001	Steven H. Bass	02-100620US	2748

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EXAMINER
SIEW, JEFFREY

ART UNIT	PAPER NUMBER
1637	9

DATE MAILED: 01/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/760,010	Applicant(s) BASS ET AL.	
	Examiner Jeffrey Siew	Art Unit 1656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 October 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-299* is/are pending in the application.

4a) Of the above claim(s) *100-299* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-99* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-299* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *1/10/01* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: .

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) Claim 17 recites the shuffling or mutagenesis module which lacks antecedent basis. It cannot be determined to what module is being referred to. Correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

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> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chetverin et al (US6,103,463 Aug. 15, 2000) in view of Nova et al (US6,284,459 Sept 4, 2001).

The teachings of Chetverin et al are described previously.

Chetverin et al do not teach bar code.

Nova et al teach bar code (col. 7 lines 51-65).

One of ordinary skill in the art would have been motivated to apply bar codes to Chetverin reaction wells in order to maintain the identity and content information. Bar codes were well known and commonly used to store information on products and quick retrieval. It would have been prima facie obvious to apply Nova et al's teaching of bar codes on arrays to Chetverin et al's reaction plates in order to permanently scribe information on the plate for later quick retrieval.

7. Claims 1 & 3-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pattern et al (US6,406,910 June 18, 2002) in view of Iverson et al (US6,180,341 Jan. 30, 2001).

Pattern et al teach shuffling in in vitro evolution and in vitro transcription and translation (see whole document esp. abstract, col. 18 lines 12-22, col. 21 lines 40-65, col. 34 liens 22-25). They also teach incubators , robotic systems (see col. 32 lines 19-65). They teach sequencing

Claims 1,2,6-11,12,13, 97,98 & 99 are rejected under 35 U.S.C. 102(e) as being anticipated by Chetverin et al (US6,103,463 Aug. 15, 2000).

Chetverin et al teach a method of protein engineering in which amplified mutant strands are transcribed and translated (see whole doc. esp. col. 83 line 15). Transcription and translation can be carried out on same array or replica array. For translation they utilize reaction mixture components for cell tree translation (see col. 83 lines 15-30).

Applicant is reminded that claim 1 is recited in the alternative. Despite later dependent claims which recite further limitations on one of the alternatives, the parent claim may still satisfied by the prior art when the other alternatives in the parent claim are met by the prior art.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

programs and computers, and optical storage devices for interfacing with assay (see col. 33 lines 1-50).

Pattern et al do not teach in vitro mutagenesis reactions in a physical array.

Iverson et al teach in vitro mutagenesis in physical array of microtiter for robotic throughput.(see col. 19 lines 59-67).

One of ordinary skill in the art would have been motivated to apply Iverson et al's in vitro transcription in microtiter format to Pattern et al's system in order to increase analytical throughput. Iverson et al states that microtiter format coupled with robotics leads to 100 fold reduction in time and effort. It would have been prima facie obvious to apply Iverson et al's microtiter format to Pattern et al's system in order to increase the number of sample analysis in in vitro evolution.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pattern et al (US6,406,910 June 18, 2002) in view of Iverson et al (US6,180,341 Jan. 30, 2001) in further view of Nova et al (US6,284,459 Sept 4, 2001).

The teachings and suggestions of Pattern et al and Iverson et al are described previously.

Nova et al teach bar code (col. 7 lines 51-65).

One of ordinary skill in the art would have been motivated to apply bar codes to combined invention of Pattern et al and Iverson et al in order to maintain the identity and content information. Bar codes were well known and commonly used to store information on products and quick retrieval. It would have been prima facie obvious to apply Nova et al's teaching of bar

codes on arrays to Pattern et al's reaction plates in order to permanently scribe information on the plate for later quick retrieval.

SUMMARY

9. No claims allowed.

CONCLUSION

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Siew whose telephone number is (703) 305-3886 and whose e-mail address is Jeffrey.Siew@uspto.gov. However, the office cannot guarantee security through the e-mail system nor should official papers be transmitted through this route. The examiner is on flex-time schedule and can best be reached on weekdays from 6:30 a.m. to 3 p.m. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Gary Benzion, can be reached on (703)-308-1119.

Any inquiry of a general nature, matching or filed papers or relating to the status of this application or proceeding should be directed to the Tracey Johnson for Art Unit 1637 whose telephone number is (703)-305-2982.

Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official

Gazette, 1096 OG 30 (November 15, 1989). The CM1 Center numbers for Group 1600 are Voice (703) 308-3290 and Before Final FAX (703) 872-9306 or After Final FAX (703) 30872-9307.

JEFFREY SIEW
PRIMARY EXAMINER

December 23, 2002